# Appendix 1C
# Construction Equipment and Workforce Estimates

The tables below display the construction equipment and workforce estimates for the various components of the Proposed Project. These include substations (Table Ap.1C-1) transmission lines (Table Ap.1C-2), shooflies (Table Ap.1C-4) subtransmission lines (Table Ap.1C-4), distribution lines (Table Ap.1C-5), and telecommunications systems (Table Ap.1C-6).

**Table Ap.1C-1. Substation Construction Equipment and Workforce Estimates**

| Primary Equipment Description | Estimated Horsepower | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/days) |
|---|---|---|---|---|---|---|
| **Vista Substation** | | | | | | |
| ***Civil*** | | | | 6-11 | | |
| Auger Truck | 210 | Diesel | 1 | 2 | 20 | 6 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 2 | | 45 | 2 |
| Boom/Crane Truck | 180 | Diesel | 1 | 2 | 20 | 4 |
| Dump Trucks | 350 | Diesel | 2 | | 25 | 4 |
| Backhoe | 125 | Diesel | 1 | 1 | 25 | 6 |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 25 | 2 |
| Forklift | 75 | Diesel | 1 | | 30 | 2 |
| Ditch Digger | 75 | Diesel | 1 | | 15 | 6 |
| ***Electrical*** | | | | 8-12 | | |
| Manlifts/Bucket Truck | 250 | Diesel | 2 | | 65 | 6 |
| Boom/Crane Truck | 180 | Diesel | 1 | 2 | 60 | 6 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 2 | | 75 | 2 |
| 150-ton Crane | 250 | Diesel | 1 | 2 | 50 | 6 |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 50 | 2 |
| Ditch Digger | 75 | Diesel | 1 | | 15 | 6 |
| Forklift | 75 | Diesel | 1 | | 65 | 2 |
| Utility Truck | 180 | Gas | 1 | | 75 | 2 |
| ***Maintenance*** | | | | 3 | | |
| Manlifts | 75 | Gas/Diesel | 1 | | 20 | 4 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 1 | | 20 | 2 |
| Gas/Processing Trailer | 0 | Electric | 0 | | 10 | 4 |
| ***Test*** | | | | 2 | | |
| Utility Truck | 180 | Gas | 1 | | 120 | 2 |
| **San Bernardino Substation** | | | | | | |
| ***Civil*** | | | | 8-13 | | |
| Auger Truck | 210 | Diesel | 1 | 2 | 24 | 6 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 2 | | 80 | 2 |
| Boom/Crane Truck | 180 | Diesel | 1 | 2 | 24 | 6 |
| Dump Trucks | 350 | Diesel | 2 | | 40 | 4 |
| Backhoe | 125 | Diesel | 1 | 1 | 40 | 6 |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 40 | 2 |

**Table Ap.1C-1. Substation Construction Equipment and Workforce Estimates**, *continued*

| Primary Equipment Description | Estimated Horsepower | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/days) |
|---|---|---|---|---|---|---|
| Forklift | 75 | Diesel | 1 | | 80 | 2 |
| Ditch Digger | 75 | Diesel | 1 | | 40 | 6 |
| ***Electrical*** | | | | 10-14 | | |
| Manlifts/Bucket Truck | 250 | Diesel | 2 | | 100 | 6 |
| Boom/Crane Truck | 180 | Diesel | 1 | 2 | 80 | 6 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 2 | | 120 | 2 |
| 150-ton Crane | 250 | Diesel | 1 | 2 | 40 | 6 |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 40 | 2 |
| Ditch Digger | 75 | Diesel | 1 | | 10 | 6 |
| Forklift | 75 | Diesel | 1 | | 100 | 2 |
| Utility Truck | 180 | Gas | 1 | | 120 | 2 |
| ***Maintenance*** | | | | 4 | | |
| Checker/Truck | 180 | Gas/Diesel | 1 | | 200 | 2 |
| Manlifts | 75 | Gas/Diesel | 1 | | 20 | 4 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 1 | | 20 | 2 |
| Gas/Processing Trailer | 0 | Electric | 0 | | 10 | 4 |
| ***Test*** | | | | 2 | | |
| Utility Truck | 180 | Gas | 1 | | 140 | 2 |
| **El Casco Substation** | | | | | | |
| ***Civil*** | | | | 6-11 | | |
| Auger Truck | 210 | Diesel | 1 | 2 | 25 | 6 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 2 | | 40 | 2 |
| Boom/Crane Truck | 180 | Diesel | 1 | 2 | 25 | 4 |
| Dump Trucks | 350 | Diesel | 2 | | 25 | 4 |
| Backhoe | 125 | Diesel | 1 | 1 | 25 | 6 |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 25 | 2 |
| Forklift | 75 | Diesel | 1 | | 30 | 2 |
| Ditch Digger | 75 | Diesel | 1 | | 10 | 6 |
| ***Electrical*** | | | | 8-12 | | |
| Manlifts/Bucket Truck | 250 | Diesel | 2 | | 40 | 6 |
| Boom/Crane Truck | 180 | Diesel | 1 | 2 | 30 | 6 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 2 | | 60 | 2 |
| 150-ton Crane | 250 | Diesel | 1 | 2 | 20 | 6 |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 20 | 2 |
| Ditch Digger | 75 | Diesel | 1 | | 10 | 6 |
| Forklift | 75 | Diesel | 1 | | 50 | 2 |
| Utility Truck | 180 | Gas | 1 | | 60 | 2 |
| ***Maintenance*** | | | | 3 | | |
| Checker/Truck | 180 | Gas/Diesel | 1 | | 100 | 2 |
| Manlifts | 75 | Gas/Diesel | 1 | | 10 | 4 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 1 | | 10 | 2 |
| Gas/Processing Trailer | 0 | Electric | 0 | | 5 | 4 |

**Table Ap.1C-1. Substation Construction Equipment and Workforce Estimates**, *continued*

| Primary Equipment Description | Estimated Horsepower | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/days) |
|---|---|---|---|---|---|---|
| ***Test*** | | | | 2 | | |
| Utility Truck | 180 | Gas | 1 | | 70 | 2 |
| **Devers Substation** | | | | | | |
| ***Civil*** | | | | 8-13 | | |
| Auger Truck | 210 | Diesel | 1 | 2 | 24 | 6 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 2 | | 80 | 2 |
| Boom/Crane Truck | 180 | Diesel | 1 | 2 | 24 | 6 |
| Dump Trucks | 350 | Diesel | 2 | | 40 | 4 |
| Backhoe | 125 | Diesel | 1 | 1 | 40 | 6 |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 40 | 2 |
| Forklift | 75 | Diesel | 1 | | 80 | 2 |
| Ditch Digger | 75 | Diesel | 1 | | 40 | 6 |
| ***Electrical*** | | | | 10-14 | | |
| Manlifts/Bucket Truck | 250 | Diesel | 2 | | 100 | 6 |
| Boom/Crane Truck | 180 | Diesel | 1 | 2 | 80 | 6 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 2 | | 120 | 2 |
| 150-ton Crane | 250 | Diesel | 1 | 2 | 40 | 6 |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 40 | 2 |
| Ditch Digger | 75 | Diesel | 1 | | 10 | 6 |
| Forklift | 75 | Diesel | 1 | | 100 | 2 |
| Utility Truck | 180 | Gas | 1 | | 120 | 2 |
| ***Maintenance*** | | | | 4 | | |
| Checker/Truck | 180 | Gas/Diesel | 1 | | 200 | 2 |
| Manlifts | 75 | Gas/Diesel | 1 | | 20 | 4 |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 1 | | 20 | 2 |
| Gas/Processing Trailer | 0 | Electric | 0 | | 10 | 4 |
| ***Test*** | | | | 2 | | |
| Utility Truck | 180 | Gas | 1 | | 140 | 2 |
| **Etiwanda Substation** | | | | | | |
| ***Electrical*** | | | | 2 | | |
| ¾-Ton Crew Cab 4×4 | 275 | Gas | 1 | | 25 | 2 |
| ***Test*** | | | | 2 | | |
| Utility Truck | 180 | Gas | 1 | | 20 | 2 |

Source: SCE, 2013, Table 3.2-C.

**Table Ap.1C-2. Transmission Construction Equipment and Workforce Estimates**

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| **Survey (1)** | | | | 4 | 39 | | 48.5 miles |
| ¾-Ton Pick-up Truck, 4×4 | 200 | Gas | 2 | | 31 | 8 | 1.3 miles |
| **Marshaling Yard (2)** | | | | 5 | | | |
| 1-Ton Crew Cab, 4×4 | 300 | Diesel | 1 | | Duration of project for each yard | 4 | |
| R/T Crane (M) | 300 | Diesel | 1 | | | 5 | |
| R/T Forklift | 200 | Diesel | 1 | | | 5 | |
| Water Truck | 300 | Diesel | 1 | | | 10 | |
| Jet A Fuel Truck | | | 1 | | | 4 | |
| Truck, Semi, Tractor | 350 | Diesel | 1 | | | 6 | |
| **ROW Clearing (3)** | | | | 5 | 156 | | 48.5 miles |
| 1-Ton Crew Cab, 4×4 | 300 | Diesel | 1 | | 124 | 10 | 0.4 miles |
| Motor Grader | 350 | Diesel | 1 | | 124 | 7 | |
| Water Truck | 350 | Diesel | 2 | | 124 | 7 | |
| Backhoe/Front Loader | 350 | Diesel | 1 | | 124 | 7 | |
| Track Type Dozer | 350 | Diesel | 1 | | 124 | 9 | |
| Lowboy Truck/Trailer | 500 | Diesel | 1 | | 124 | 5 | |
| **Roads & Landing Work (4)** | | | | 10 | 144 | | 157.2 miles & 574 pads |
| 1-Ton Crew Cab, 4×4 | 300 | Diesel | 4 | | 122 | 5 | 1.3 miles & 5 structure pads |
| Motor Grader | 350 | Diesel | 2 | | 122 | 5 | |
| Water Truck | 350 | Diesel | 4 | | 122 | 10 | |
| Backhoe/Front Loader | 350 | Diesel | 2 | | 122 | 7 | |
| Drum Type Compactor | 250 | Diesel | 2 | | 122 | 5 | |
| Track Type Dozer | 350 | Diesel | 2 | | 122 | 7 | |
| Excavator | 300 | Diesel | 2 | | 61 | 7 | |
| Lowboy Truck/Trailer | 500 | Diesel | 2 | | 61 | 4 | |
| **Guard Structure Installation (5)** | | | | 12 | 57 | | 673 structures |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 4 | | 56 | 8 | 12 structures |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 2 | | 56 | 8 | |
| Compressor Trailer | 120 | Diesel | 2 | | 56 | 7 | |
| Auger Truck | 500 | Diesel | 2 | | 56 | 5 | |
| Extendable Flatbed Pole Truck | 350 | Diesel | 2 | | 56 | 8 | |
| R/T Crane (M) | 500 | Diesel | 2 | | 56 | 8 | |
| Water Truck | 350 | Diesel | 1 | | 56 | 8 | |
| Extendable Flatbed Pole Truck | 350 | Diesel | 2 | | 56 | 8 | |
| **Remove Existing Conductor & OHGW (6)** | | | | 56 | 468 | | 772 circuit miles |
| 1-Ton Crew Cab, 4×4 | 300 | Diesel | 16 | | 468 | 10 | 1.7 miles |
| Manlift/Bucket Truck | 350 | Diesel | 12 | | 468 | 10 | |
| Sleeving Truck | 300 | Diesel | 4 | | 468 | 5 | |
| R/T Crane (M) | 300 | Diesel | 4 | | 468 | 5 | |
| Flatbed Trailer | N/A | N/A | 12 | | 422 | 3 | |
| Truck, Semi, Tractor | 350 | Diesel | 4 | | 422 | 3 | |
| Bull Wheel Puller | 500 | Diesel | 4 | | 317 | 5 | |

**Table Ap.1C-2. Transmission Construction Equipment and Workforce Estimates**

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| Water Truck | 350 | Diesel | 4 | | 317 | 6 | |
| Hydraulic Rewind Puller | 300 | Diesel | 4 | | 317 | 5 | |
| **220 kV H-Frame/Three Pole Structure Removals** | | | | 32 | 31 | | 186 structures |
| 1-Ton Truck, 4×4 | 300 | Diesel | 8 | | 31 | 10 | 6 structures |
| Compressor Trailer | 120 | Diesel | 8 | | 31 | 5 | |
| Backhoe/Front Loader | 350 | Diesel | 4 | | 31 | 10 | |
| Manlift/Bucket Truck | 250 | Diesel | 4 | | 31 | 8 | |
| Boom/Crane Truck | 350 | Diesel | 4 | | 31 | 8 | |
| Flatbed Pole Truck | 400 | Diesel | 4 | | 31 | 10 | |
| **Remove Existing Lattice Steel Towers (7)** | | | | 32 | 171 | | 426 towers |
| 1-Ton Crew Cab, 4×4 | 300 | Diesel | 8 | | 171 | 8 | 2.5 towers |
| R/T Crane (M) | 215 | Diesel | 8 | | 171 | 5 | |
| Compressor Trailer | 120 | Diesel | 8 | | 171 | 10 | |
| Flatbed Truck/Trailer | 350 | Diesel | 4 | | 171 | 8 | |
| Water Truck | 350 | Diesel | 4 | | 171 | 6 | |
| **Remove Existing Foundations (8)** | | | | 16 | 173 | | 431 |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 4 | | 173 | 10 | 2.5 towers |
| Dump Truck | 350 | Diesel | 4 | | 173 | 10 | |
| Backhoe/Front Loader | 350 | Diesel | 4 | | 173 | 10 | |
| Water Truck | 350 | Diesel | 4 | | 173 | 10 | |
| **Remove Existing Tubular Steel Poles (9)** | | | | 24 | 2 | | 5 TSP |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 8 | | 2 | 8 | 3.8 steel poles |
| R/T Crane (M) | 300 | Diesel | 4 | | 2 | 5 | |
| Compressor Trailer | 120 | Diesel | 4 | | 2 | 10 | |
| Water Truck | 350 | Diesel | 4 | | 2 | 10 | |
| **Install LST Foundations (10)** | | | | 28 | 166 | | 526 LSTs |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 8 | | 142 | 5 | 3.2 LSTs |
| R/T Crane (M) | 300 | Diesel | 4 | | 142 | 7 | |
| Backhoe/Front Loader | 200 | Diesel | 4 | | 142 | 10 | |
| Auger Truck | 500 | Diesel | 4 | | 142 | 10 | |
| 10-cu. yd. Dump Truck | 350 | Diesel | 8 | | 142 | 10 | |
| Kaman K-MAX | | Jet A | 1 | | 142 | 7 | |
| 4,000-gallon Water Truck | 350 | Diesel | 4 | | 142 | 10 | |
| 10-cu. yd. Concrete Mixer Truck | 425 | Diesel | 12 | | 142 | 7 | |
| **LST Steel Haul (11)** | | | | 8 | 211 | | 526 LSTs |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 4 | | 181 | 10 | 2.5 LSTs |
| Truck/Trailer | 400 | Diesel | 4 | | 181 | 10 | |
| Bell 500 | | Jet A | 2 | | 105 | 7 | |
| 4,000-gallon Water Truck | 350 | Diesel | 4 | | 181 | 10 | |
| R/T Forklift | 200 | Diesel | 2 | | 181 | 6 | |

**Table Ap.1C-2. Transmission Construction Equipment and Workforce Estimates**

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| **LST Steel Assembly (12)** | | | | 40 | 395 | | 526 LSTs |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 4 | | 339 | 5 | |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 6 | | 339 | 5 | |
| R/T Forklift | 125 | Diesel | 4 | | 339 | 7 | 1.4 LSTs |
| R/T Crane (L) | 300 | Diesel | 4 | | 339 | 10 | |
| Kaman K-MAX | | Jet A | 1 | | 339 | 7 | |
| Compressor Trailer | 120 | Diesel | 4 | | 339 | 6 | |
| **LST Erection (13)** | | | | 48 | 275 | | 526 LSTs |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 8 | | 236 | 8 | |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 8 | | 236 | 8 | |
| 4,000-gallon Water Truck | 350 | Diesel | 4 | | 236 | 10 | 2 LSTs |
| R/T Crane (M) | 215 | Diesel | 4 | | 236 | 7 | |
| R/T Crane (L) | 350 | Diesel | 4 | | 236 | 7 | |
| **Install Tubular Steel Pole Foundations (14)** | | | | 24 | 19 | | 46 TSPs |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 12 | | 4 | 5 | |
| R/T Crane (M) | 300 | Diesel | 4 | | 4 | 7 | |
| Backhoe/Front Loader | 200 | Diesel | 4 | | 4 | 10 | |
| Auger Truck | 500 | Diesel | 4 | | 4 | 10 | 2.5 TSPs |
| 4,000-gallon Water Truck | 350 | Diesel | 4 | | 4 | 10 | |
| 10-cu. yd. Dump Truck | 350 | Diesel | 8 | | 4 | 10 | |
| 10-cu. yd. Concrete Mixer Truck | 425 | Diesel | 12 | | 4 | 6 | |
| **Steel Pole Haul (15)** | | | | 8 | 5 | | 46 TSPs |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 4 | | 1 | 8 | |
| 4,000-gallon Water Truck | 350 | Diesel | 4 | | 1 | 10 | 10 steel poles |
| R/T Crane (L) | 350 | Diesel | 2 | | 1 | 10 | |
| 40' Flatbed Truck/Trailer | 350 | Diesel | 4 | | 1 | 8 | |
| **Steel Pole Assembly (16)** | | | | 24 | 10 | | 46 TSPs |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 8 | | 2 | 8 | |
| 4,000-gallon Water Truck | 350 | Diesel | 4 | | 2 | 10 | |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 8 | | 2 | 6 | 5 steel poles |
| Compressor Trailer | 120 | Diesel | 4 | | 2 | 6 | |
| R/T Crane (L) | 350 | Diesel | 4 | | 2 | 6 | |
| **Steel Pole Erection (17)** | | | | 24 | 10 | | 46 TSPs |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 8 | | 2 | 5 | |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 8 | | 2 | 5 | |
| 4,000-gallon Water Truck | 350 | Diesel | 4 | | 2 | 10 | 5 steel poles |
| Compressor Trailer | 120 | Diesel | 4 | | 2 | 5 | |
| R/T Crane (L) | 350 | Diesel | 4 | | 2 | 6 | |
| **H-Frame Installation (18)** | | | | 12 | 5 | | 1 structure |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 4 | | 5 | 8 | |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 2 | | 5 | 8 | |
| Compressor Trailer | 120 | Diesel | 2 | | 5 | 7 | |
| Auger Truck | 500 | Diesel | 2 | | 5 | 5 | |
| Extendable Flatbed Pole Truck | 350 | Diesel | 2 | | 5 | 8 | |

**Table Ap.1C-2. Transmission Construction Equipment and Workforce Estimates**

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| R/T Crane (M) | 500 | Diesel | 2 | | 5 | 8 | |
| Water Truck | 350 | Diesel | 1 | | 5 | 8 | |
| Extendable Flatbed Pole Truck | 350 | Diesel | 2 | | 5 | 8 | |
| **Install Conductor — (19)** | | | | 220 | 122 | | 184 circuit miles |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 4 | | 95 | 10 | |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 8 | | 95 | 10 | |
| Wire Truck/Trailer | 350 | Diesel | 4 | | 65 | 10 | |
| R/T Crane (M) | 215 | Diesel | 4 | | 95 | 10 | |
| Dump Truck | 350 | Diesel | 2 | | 95 | 10 | |
| Bucket Truck | 350 | Diesel | 4 | | 95 | 10 | |
| 22-Ton Manitex | 350 | Diesel | 4 | | 95 | 10 | |
| Splicing Rig | 350 | Diesel | 2 | | 25 | 5 | |
| Splicing Lab | 300 | Diesel | 2 | | 25 | 5 | 1.6 miles |
| Sock Line Puller | 300 | Diesel | 2 | | 25 | 6 | |
| Bull Wheel Puller | 350 | Diesel | 2 | | 50 | 10 | |
| Backhoe/Front Loader | 125 | Diesel | 2 | | 50 | 8 | |
| D8 Cat | 350 | Diesel | 1 | | 50 | 8 | |
| Hughes 500 E Helicopter | | Jet A | 2 | | 50 | 7 | |
| Fuel, Helicopter Support Truck | 300 | Diesel | 2 | | 50 | 7 | |
| Sag Cat w/ 2 winches | 350 | Diesel | 1 | | 25 | 10 | |
| Static Truck/Tensioner | 350 | Diesel | 2 | | 50 | 10 | |
| **Guard Structure Removal (20)** | | | | 12 | 40 | | 669 structures |
| ¾-Ton Pick-up Truck, 4×4 | 300 | Diesel | 4 | | 39 | 7 | |
| 1-Ton Crew Cab Flatbed, 4×4 | 300 | Diesel | 4 | | 39 | 7 | |
| Compressor Trailer | 120 | Diesel | 4 | | 39 | 7 | |
| Extendable Flatbed Pole Truck | 350 | Diesel | 4 | | 39 | 6 | 17.2 structures |
| Water Truck | 300 | Diesel | 2 | | 39 | 10 | |
| R/T Crane (M) | 500 | Diesel | 2 | | 39 | 8 | |
| 80 ft. Hydraulic Manlift/Bucket Truck | 350 | Diesel | 2 | | 39 | 4 | |
| **Restoration (21)** | | | | 14 | 20 | | 48.5 Miles |
| 1-Ton Crew Cab, 4×4 | 300 | Diesel | 4 | | 16 | 2 | |
| Motor Grader | 350 | Diesel | 2 | | 16 | 6 | |
| Water Truck | 350 | Diesel | 2 | | 16 | 8 | |
| Backhoe/Front Loader | 350 | Diesel | 2 | | 16 | 6 | 2.5 miles |
| Drum Type Compactor | 250 | Diesel | 2 | | 16 | 6 | |
| Track Type Dozer | 350 | Diesel | 2 | | 16 | 6 | |
| Lowboy Truck/Trailer | 300 | Diesel | 2 | | 16 | 3 | |
| **Retaining walls (22)** | | | | 100 | | | 53 walls |
| 1-Ton Crew Cab, 4×4 | 300 | Diesel | 4 | | 254 | 10 | |
| Motor Grader | 250 | Diesel | 2 | | 254 | 10 | |
| Water Truck | 350 | Diesel | 2 | | 254 | 10 | 48 days/wall |
| Backhoe/Front Loader | 125 | Diesel | 2 | | 254 | 10 | |
| Drum Type Compactor | 250 | Diesel | 2 | | 254 | 10 | |

## Table Ap.1C-2. Transmission Construction Equipment and Workforce Estimates

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| Track Type Dozer | 350 | Diesel | 2 | | 254 | 10 | |
| Concrete Mixer | 350 | Diesel | 2 | | 254 | 10 | |
| Excavator | 250 | Diesel | 2 | | 254 | 10 | |
| Dump Truck | 350 | Diesel | 2 | | 254 | 10 | |
| Lowboy Truck/Trailer | 300 | Diesel | 2 | | 254 | 10 | |

Source: SCE, 2013, Tables 3.2-H and 3.13-D.

**Crew Size Assumptions:**

1 Survey = one 4-man crew
2 Marshaling Yards = four 1-man crews
3 Right-of-way Clearing = one 5-man crew
4 Roads & Landing Work = two 5-man crews
5 Guard Structure Installation = two 6-man crews
6 Remove Existing Conductor & OHGW = four 14-man crews
7 Remove Existing LSTs & LSH-Frames = four 8-man crews
8 Remove Existing Foundations = four 4-man crews
N/A Remove Existing Wood Poles = 0 0-man crews
9 Remove Existing TSP / LWS Poles = four 6-man crews
10 Install Foundations for LSTs = four 7-man crews
11 LST Steel Haul = two 4-man crews
12 LST Steel Assembly = four 10-man crews
13 LST Erection = four 12-man crews
14 Install Foundations for TSPs = four 6-man crews
15 Steel Pole Haul = two 4-man crews
16 Steel Pole Assembly = four 6-man crews
17 Steel Pole Erection = four 6-man crews
18 H-Frame Installation = 1 8-man crew
19 Conductor & OHGW/OPGW Installation = four 55-man crews
20 Guard Structure Removal = two 6-man crews
21 Restoration = two 7-man crews
22 Retaining Walls = ten 10-man crews

**Table Ap.1C-3. Transmission Shoo-Fly Construction Equipment and Workforce Estimates**

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| **Survey (1)** | | | | **16** | **26** | | **20 miles** |
| 1-Ton Pick-up Truck, 4×4 | 300 | Gas | 8 | | 26 | 10 | |
| **ROW Clearing (3)** | | | | **15** | **14** | | **20 miles** |
| 1-Ton Truck, 4×4 | 300 | Gas | 3 | | 14 | 10 | |
| Backhoe/Front Loader | 350 | Diesel | 3 | | 14 | 7 | |
| Track Type Dozer | 350 | Diesel | 3 | | 14 | 7 | |
| Road Grader | 350 | Diesel | 3 | | 14 | 7 | |
| Water Truck | 300 | Diesel | 6 | | 14 | 9 | |
| Lowboy Truck/Trailer | 500 | Diesel | 3 | | 14 | 5 | |
| **Roads & Landing Work (4)** | | | | **24** | **60** | | **300 pads** |
| 1-Ton Truck, 4×4 | 300 | Gas | 8 | | 60 | 5 | |
| Backhoe/Front Loader | 350 | Diesel | 4 | | 60 | 7 | |
| Track Type Dozer | 350 | Diesel | 4 | | 60 | 7 | |
| Motor Grader | 350 | Diesel | 4 | | 60 | 5 | |
| Water Truck | 300 | Diesel | 8 | | 60 | 10 | |
| Drum Type Compactor | 250 | Diesel | 4 | | 60 | 5 | |
| Excavator | 300 | Diesel | 4 | | 36 | 7 | |
| Lowboy Truck/Trailer | 500 | Diesel | 4 | | 36 | 4 | |
| **Shoo-fly Direct Buried Steel/Wood Poles (DBSP) Haul (5)** | | | | **8** | **120** | | **300 DBSP poles** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 2 | | 120 | 10 | |
| Water Truck | 300 | Diesel | 1 | | 120 | 10 | |
| Boom/Crane Truck | 350 | Diesel | 2 | | 120 | 8 | |
| Flatbed Pole Truck | 400 | Diesel | 2 | | 120 | 10 | |
| **Shoo-fly Direct Buried Steel/Wood Pole Assembly (6)** | | | | **18** | **150** | | **300 DBSP poles** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 2 | | 150 | 6 | |
| Compressor Trailer | 120 | Diesel | 1 | | 150 | 6 | |
| 1-Ton Truck, 4×4 | 300 | Diesel | 2 | | 150 | 10 | |
| 4,000-gallon Water Truck | 350 | Diesel | 1 | | 150 | 10 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 150 | 8 | |
| **Install Shoo-fly Direct Buried Steel/Wood Pole (7)** | | | | **18** | **100** | | **300 DBSP poles** |
| 1-Ton Truck, 4×4 | 300 | Diesel | 2 | | 100 | 6 | |
| Manlift/Bucket Truck | 350 | Diesel | 2 | | 100 | 10 | |
| Boom/Crane Truck | 350 | Diesel | 2 | | 100 | 7 | |
| Auger Truck | 210 | Diesel | 2 | | 70 | 8 | |
| Water Truck | 300 | Diesel | 2 | | 100 | 10 | |
| Backhoe/Front Loader | 125 | Diesel | 2 | | 100 | 10 | |
| Extendable Flatbed Pole Truck | 400 | Diesel | 2 | | 100 | 6 | |
| **Install Conductor/GW (8)** | | | | **165** | **20** | | **20 miles** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 3 | | 20 | 10 | |
| 1-Ton Truck, 4×4 | 300 | Diesel | 6 | | 20 | 10 | |

**Table Ap.1C-3. Transmission Shoo-Fly Construction Equipment and Workforce Estimates**, *continued*

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| Manlift/Bucket Truck | 350 | Diesel | 3 | | 20 | 10 | |
| Boom/Crane Truck | 350 | Diesel | 3 | | 20 | 10 | |
| R/T Crane (M) | 215 | Diesel | 3 | | 20 | 10 | |
| Dump Truck | 350 | Diesel | 2 | | 20 | 10 | |
| Wire Truck/Trailer | 350 | Diesel | 3 | | 5.4 | 10 | |
| Sock Line Puller | 300 | Diesel | 2 | | 5.4 | 10 | |
| Bull Wheel Puller | 350 | Diesel | 2 | | 10 | 10 | |
| Static Truck/Tensioner | 350 | Diesel | 2 | | 20 | 10 | |
| Splicing Rig | 350 | Diesel | 2 | | 5.4 | 10 | |
| Spacing Cart | 10 | Diesel | 4 | | 5.4 | 10 | |
| Backhoe/Front Loader | 125 | Diesel | 2 | | 4 | 8 | |
| D8 Cat | 350 | Diesel | 1 | | 4 | 8 | |
| Sag Cat w/ 2 winches | 350 | Diesel | 1 | | 4 | 10 | |
| Lowboy Truck/Trailer | 450 | Diesel | 3 | | 20 | 10 | |
| Hughes 500 E | | Jet A | 2 | | 4 | 7 | |
| Fuel, Helicopter Support Truck | 300 | Diesel | 2 | | 4 | 7 | |
| **Remove Shoo-fly Conductor & GW (9)** | | | | **28** | **20** | | **20 circuit miles** |
| 1-Ton Truck, 4×4 | 300 | Diesel | 8 | | 20 | 10 | |
| Manlift/Bucket Truck | 250 | Diesel | 6 | | 20 | 10 | |
| Sleeving Truck | 300 | Diesel | 4 | | 20 | 5 | |
| Boom/Crane Truck | 350 | Diesel | 4 | | 20 | 5 | |
| Bull Wheel Puller | 500 | Diesel | 2 | | 14 | 5 | |
| Truck, Semi-Tractor | 350 | Diesel | 2 | | 10 | 2 | |
| Hydraulic Rewind Puller | 300 | Diesel | 2 | | 14 | 5 | |
| 4,000-gallon Water Truck | 350 | Diesel | 2 | | 20 | 10 | |
| Lowboy Truck/Trailer | 450 | Diesel | 6 | | 20 | 3 | |
| **Shoo-fly Pole Removal (10)** | | | | **8** | **80** | | **300 LWS poles** |
| 1-Ton Truck, 4×4 | 300 | Diesel | 2 | | 80 | 6 | |
| Compressor Trailer | 60 | Diesel | 2 | | 80 | 6 | |
| Water Truck | 300 | Diesel | 2 | | 80 | 10 | |
| Manlift/Bucket Truck | 250 | Diesel | 2 | | 80 | 10 | |
| Boom/Crane Truck | 350 | Diesel | 2 | | 80 | 7 | |
| Flatbed Truck/Trailer | 400 | Diesel | 2 | | 80 | 6 | |
| **Restoration (11)** | | | | **21** | **8** | | **20 miles** |
| 1-Ton Truck, 4×4 | 300 | Diesel | 6 | | 8 | 4 | |
| Backhoe/Front Loader | 125 | Diesel | 3 | | 8 | 7 | |
| Motor Grader | 250 | Diesel | 3 | | 8 | 7 | |
| Water Truck | 300 | Diesel | 3 | | 8 | 10 | |
| Drum Type Compactor | 100 | Diesel | 3 | | 8 | 7 | |
| Lowboy Truck/Trailer | 450 | Diesel | 3 | | 8 | 3 | |

Source: SCE, 2013, Table 3.2-J.

**Crew Size Assumptions:**

1 Survey = four 4-man crews
2 Construction and materials yards = one 4-man crew for each yard
3 Right-of-way clearing = three 5-man crews
4 Roads & landing work = four 6-man crews
5 Shoo-fly pole haul = two 4-man crews
6 Wood/LWS/shoo-Fly pole assembly = three 6-man crews
7 Install wood/H-frame/LWS/shoo-fly pole = three 6-man crews
8 Install/transfer conductor/GW = three 55-man crews
9 Remove shoo-fly conductor & GW = two 14-man crews
10 Shoo-fly pole removal = one 6-man crew
11 Restoration = three 7-man crews

**Table Ap.1C-4. Subtransmission Construction Equipment and Workforce Estimates**

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| **Survey (1)** | | | | 4 | 6 | | 5.3 miles |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 6 | 8 | 1 mile |
| **Marshaling Yard (2)** | | | | 4 | | | 1 yard |
| 1-Ton Truck, 4×4 | 300 | Gas | 1 | | Duration of project | 4 | 5 acres |
| R/T Forklift | 125 | Diesel | 1 | | | 6 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | | 2 | |
| Water Truck | 300 | Diesel | 1 | | | 8 | |
| Truck, Semi-Tractor | 400 | Diesel | 1 | | | 2 | |
| **ROW Clearing (3)** | | | | 5 | 14 | | 3.3 miles |
| 1-Ton Truck, 4×4 | 300 | Gas | 1 | | 14 | 8 | 0.25 miles |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 14 | 6 | |
| Track Type Dozer | 150 | Diesel | 1 | | 14 | 6 | |
| Motor Grader | 250 | Diesel | 1 | | 14 | 6 | |
| Water Truck | 300 | Diesel | 1 | | 14 | 8 | |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 14 | 4 | |
| **Roads & Landing Work (4)** | | | | 5 | 4 | | 2 miles & 9 pads |
| 1-Ton Truck, 4×4 | 300 | Gas | 1 | | 4 | 8 | existing roads: 2 miles structure pads (flat to mod): 4 pads |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 4 | 4 | |
| Track Type Dozer | 150 | Diesel | 1 | | 4 | 4 | |
| Motor Grader | 250 | Diesel | 1 | | 4 | 6 | |
| Water Truck | 300 | Diesel | 1 | | 4 | 8 | |
| Drum Type Compactor | 100 | Diesel | 1 | | 4 | 6 | |
| Excavator | 250 | Diesel | 1 | | 3 | 4 | |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 4 | 4 | |
| **Guard Structure Installation (5)** | | | | **6** | **14** | | **70 structures** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 1 | | 14 | 8 | 5 structures |
| 1-Ton Truck, 4×4 | 300 | Gas | 1 | | 14 | 8 | |
| Compressor Trailer | 60 | Diesel | 1 | | 14 | 4 | |
| Manlift/Bucket Truck | 250 | Diesel | 1 | | 14 | 4 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 14 | 6 | |
| Auger Truck | 210 | Diesel | 1 | | 14 | 4 | |
| Extendable Flatbed Pole Truck | 400 | Diesel | 1 | | 14 | 8 | |
| **Remove Existing Conductor & GW (6)** | | | | **14** | **8** | | **4 circuit miles** |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 8 | 4 | non-bundled: 0.5 miles |
| Manlift/Bucket Truck | 250 | Diesel | 2 | | 8 | 8 | |
| Boom/Crane Truck | 350 | Diesel | 2 | | 8 | 8 | |
| Bull Wheel Puller | 350 | Diesel | 1 | | 6 | 6 | |
| Sock Line Puller | 300 | Diesel | 1 | | 6 | 6 | |
| Static Truck/Tensioner | 350 | Diesel | 1 | | 8 | 6 | |
| Lowboy Truck/Trailer | 450 | Diesel | 2 | | 8 | 4 | |

**Table Ap.1C-4. Subtransmission Construction Equipment and Workforce Estimates**, *continued*

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| **Wood/LWS Pole Removal (7)** | | | | **6** | **4** | | **28 poles** |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 4 | 8 | |
| Compressor Trailer | 60 | Diesel | 1 | | 4 | 4 | |
| Manlift/Bucket Truck | 250 | Diesel | 1 | | 4 | 6 | 9 poles |
| Boom/Crane Truck | 350 | Diesel | 1 | | 4 | 6 | |
| Flatbed Pole Truck | 400 | Diesel | 1 | | 4 | 8 | |
| **LST Removal (8)** | | | | **6 (S/C)** | **18** | | **9 LSTs** |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 18 | 4 | |
| Compressor Trailer | 60 | Diesel | 1 | | 18 | 8 | |
| R/T Crane (M) | 215 | Diesel | 1 | | 18 | 6 | 0.5 LSTs |
| Boom/Crane Truck | 350 | Diesel | 1 | | 18 | 6 | |
| Flatbed Truck/Trailer | 400 | Diesel | 1 | | 18 | 4 | |
| **LST Foundation Removal (9)** | | | | **4** | **5** | | **9 LSTs** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 1 | | 5 | 4 | |
| Compressor Trailer | 60 | Diesel | 1 | | **5** | 8 | |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 5 | 6 | 2 LSTs |
| Dump Truck | 350 | Diesel | 1 | | 5 | 6 | |
| Excavator | 250 | Diesel | 1 | | 5 | 4 | |
| **Install TSP Foundations (10)** | | | | **6** | **54** | | **26 TSPs** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 1 | | 54 | 4 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 54 | 4 | |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 54 | 6 | |
| Auger Truck | 210 | Diesel | 1 | | 21 | 6 | 0.5 TSPs |
| Water Truck | 300 | Diesel | 1 | | 49 | 8 | |
| Dump Truck | 350 | Diesel | 1 | | 49 | 4 | |
| Concrete Mixer Truck | 350 | Diesel | 3 | | 33 | 2 | |
| **TSP Haul (11)** | | | | **4** | **7** | | **26 TSPs** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 1 | | 7 | 8 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 7 | 6 | 4 TSPs |
| Flatbed Pole Truck | 400 | Diesel | 1 | | 7 | 8 | |
| **TSP Assembly (12)** | | | | **8** | **26** | | **26 TSPs** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 2 | | 26 | 4 | |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 26 | 4 | 1 TSP |
| Compressor Trailer | 60 | Diesel | 1 | | 26 | 6 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 26 | 8 | |
| **TSP Erection (13)** | | | | **8** | **26** | | **26 TSPs** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 2 | | 26 | 4 | |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 26 | 4 | 1 TSP |
| Compressor Trailer | 60 | Diesel | 1 | | 26 | 4 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 26 | 8 | |

**Table Ap.1C-4. Subtransmission Construction Equipment and Workforce Estimates**, *continued*

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| **LWS Pole Haul (14)** | | | | **4** | **27** | | **154 LWS poles** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 1 | | 27 | 8 | 6 poles |
| Boom/Crane Truck | 350 | Diesel | 1 | | 27 | 6 | |
| Flatbed Pole Truck | 400 | Diesel | 1 | | 27 | 8 | |
| **LWS Pole Assembly (15)** | | | | **8** | **39** | | **154 LWS poles** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 2 | | 39 | 4 | 4 poles |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 39 | 4 | |
| Compressor Trailer | 60 | Diesel | 1 | | 39 | 6 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 39 | 8 | |
| **Install LWS Pole (16)** | | | | **6** | **39** | | **154 poles** |
| 1-Ton Truck, 4×4 | 300 | Gas | 1 | | 39 | 8 | 4 poles |
| Manlift/Bucket Truck | 250 | Diesel | 1 | | 39 | 6 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 39 | 6 | |
| Auger Truck | 210 | Diesel | 1 | | 39 | 4 | |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 39 | 8 | |
| Extendable Flatbed Pole Truck | 400 | Diesel | 1 | | 39 | 8 | |
| **Install Conductor (17)** | | | | **20** | **13** | | **4.3 circuit miles** |
| 1-Ton Truck, 4×4 | 300 | Gas | 3 | | 13 | 4 | 0.33 miles |
| Manlift/Bucket Truck | 250 | Diesel | 4 | | 13 | 8 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 13 | 8 | |
| Dump Truck | 350 | Diesel | 1 | | 13 | 2 | |
| Wire Truck/Trailer | 350 | Diesel | 2 | | 13 | 6 | |
| Sock Line Puller | 300 | Diesel | 1 | | 5 | 6 | |
| Bull Wheel Puller | 350 | Diesel | 1 | | 9 | 6 | |
| Static Truck/Tensioner | 350 | Diesel | 1 | | 13 | 6 | |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 13 | 2 | |
| Lowboy Truck/Trailer | 450 | Diesel | 2 | | 13 | 4 | |
| Hughes 500 E Helicopter | | Jet A | 1 | | 4 | 6 | |
| Fuel, Helicopter Support Truck | 300 | Diesel | 1 | | 4 | 6 | |
| **Guard Structure Removal (18)** | | | | **6** | **10** | | **70 structures** |
| ¾-Ton Truck, 4×4 | 275 | Gas | 1 | | 10 | 8 | 7 structures |
| 1-Ton Truck, 4×4 | 300 | Gas | 1 | | 10 | 8 | |
| Compressor Trailer | 60 | Diesel | 1 | | 10 | 4 | |
| Manlift/Bucket Truck | 250 | Diesel | 1 | | 10 | 4 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 10 | 6 | |
| Extendable Flatbed Pole Truck | 400 | Diesel | 1 | | 10 | 8 | |

**Table Ap.1C-4. Subtransmission Construction Equipment and Workforce Estimates**, *continued*

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hrs/day) | Estimated Production Per Day |
|---|---|---|---|---|---|---|---|
| **Restoration (19)** | | | | **7** | **4** | | **3.3 miles** |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 4 | 4 | 1 mile |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 4 | 4 | |
| Motor Grader | 250 | Diesel | 1 | | 4 | 6 | |
| Water Truck | 300 | Diesel | 1 | | 4 | 8 | |
| Drum Type Compactor | 100 | Diesel | 1 | | 4 | 4 | |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 4 | 4 | |
| **Vault Installation (20)** | | | | **6** | **27** | | **9 vaults** |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 27 | 4 | 0.33 vaults |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 27 | 8 | |
| Excavator | 250 | Diesel | 1 | | 14 | 6 | |
| Dump Truck | 350 | Diesel | 2 | | 27 | 8 | |
| Water Truck | 300 | Diesel | 1 | | 27 | 8 | |
| Crane (L) | 500 | Diesel | 1 | | 9 | 6 | |
| Concrete Mixer Truck | 350 | Diesel | 3 | | 14 | 2 | |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 9 | 4 | |
| Flatbed Truck/Trailer | 400 | Diesel | 3 | | 9 | 4 | |
| **Duct Bank Installation (21)** | | | | **6** | **22** | | **5,380 trench feet** |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 22 | 4 | 250 feet |
| Compressor Trailer | 60 | Diesel | 1 | | 22 | 4 | |
| Backhoe/Front Loader | 125 | Diesel | 1 | | 22 | 6 | |
| Dump Truck | 350 | Diesel | 2 | | 22 | 6 | |
| Pipe Truck/Trailer | 275 | Diesel | 1 | | 22 | 6 | |
| Water Truck | 300 | Diesel | 1 | | 22 | 8 | |
| Concrete Mixer Truck | 350 | Diesel | 3 | | 22 | 2 | |
| Lowboy Truck/Trailer | 450 | Diesel | 1 | | 8 | 4 | |
| **Install Underground Cable (22)** | | | | **8** | **3** | | **1 circuit mile** |
| 1-Ton Truck, 4×4 | 300 | Gas | 2 | | 3 | 4 | 0.33 miles |
| Manlift/Bucket Truck | 250 | Diesel | 1 | | 3 | 6 | |
| Boom/Crane Truck | 350 | Diesel | 1 | | 3 | 6 | |
| Wire Truck/Trailer | 350 | Diesel | 2 | | 3 | 6 | |
| Puller | 350 | Diesel | 1 | | 3 | 6 | |
| Static Truck/Tensioner | 350 | Diesel | 1 | | 3 | 6 | |

Source: SCE, 2013, Table 3.2-K.

**Crew Size Assumptions:**
1 - Survey = one 4-man crew
2 - Marshaling Yards = one 4-man crew
3 - Right-of-way Clearing = one 5-man crew
4 - Roads & Landing Work = one 5-man crew
5 - Guard Structure Installation = one 6-man crew
6 - Remove Existing Conductor & GW = one 14-man crew
7 - Remove Existing Wood/LWS Poles = one 6-man crew
8 - Remove Existing LSTs = one 6-man crew

9 - Remove Existing LST Foundations = one 4-man crew
10 - Install Foundations for TSPs = one 6-man crew
11 - TSP Haul = one 4-man crew
12 - TSP Assembly = one 8-man crew
13 - TSP Erection = one 8-man crew
14 - TSP Haul = one 4-man crew
15 - TSP Assembly = one 8-man crew
16 - Install Wood/LWS Pole = one 6-man crew
17 - Conductor & GW Installation = two 10-man crews
18 - Guard Structure Removal = one 6-man crew
19 - Restoration = one 7-man crew
20 - Vault Installation = one 6-man crew
21 - Duct Bank Installation = one 6-man crew
22 - Install Underground Cable = one 8-man crew

**Table Ap.1C-5. Distribution Construction Equipment and Workforce Estimates**

| Activity and Number of Personnel | Work Days | Equipment and Quantity | Duration of Use (hours) | Fuel Type |
|---|---|---|---|---|
| Location 1 (8 people) | 3 | 2 – Line Truck | 7 | Diesel |
| | 3 | 2 – Pickup Truck | 7 | Diesel |
| Location 2 (8 people) | 3 | 2 – Line Truck | 7 | Diesel |
| | 3 | 2 – Pickup Truck | 7 | Diesel |
| Location 3 (8 people) | 6 | 2 – Line Truck | 7 | Diesel |
| | 6 | 2 – Pickup Truck | 7 | Diesel |
| Location 4 (7 people) | 5 | 1 – Rodder Truck | 6 | Diesel |
| | 5 | 1 – Cable Dolly | 6 | |
| | 5 | 1 – Reel Truck | 6 | Diesel |
| | 20 | 1 – Concrete Truck | 4 | Diesel |
| | 20 | 1 – Dump Truck | 6 | Diesel |
| | 20 | 1 – Backhoe | 8 | Diesel |
| Location 5 (8 people) | 8 | 2 – Line Truck | 7 | Diesel |
| | 8 | 2 – Pickup Truck | 7 | Diesel |

Source: SCE, 2013, Table 3.2-M.

**Table Ap.1C-6. Telecommunication System Construction Equipment and Workforce Estimates**

| Primary Equipment Description | Estimated Horse-power | Probable Fuel Type | Primary Equipment Quantity | Estimated Workforce | Estimated Schedule (days) | Duration of Use (hours) |
|---|---|---|---|---|---|---|
| **Telecommunications work for OPGW and work to accommodate construction** | | | | | | |
| Bucket Truck | 300 | Diesel | 6 | 12 | 24 | 7 |
| Crew Truck | 300 | Diesel | 3 | 3 | 24 | 8 |
| Backhoe | 200 | Diesel | 2 | 4 | 40 | 7 |
| Dump truck | 350 | Diesel | 2 | 3 | 17 | 3 |
| Material Transport | 350 | Diesel | 1 | 1 | 4 | 4 |
| Forklift | 200 | Diesel | 1 | 1 | 4 | 1 |
| Splice Lab | 300 | Diesel | 6 | 12 | 36 | 7 |
| **Telecommunications work inside the MEER** | | | | | | |
| Crew Truck | 300 | Gas | 3 | 3 | 30 | 8 |

Source: SCE, 2013, Table 3.2-O.